



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/587,193

03/19/2007

Kazuyoshi Takeda

5426JS-6

4884

22442

7590

09/03/2008

SHERIDAN ROSS PC
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

EXAMINER

IBRAHIM, MEDINA AHMED

ART UNIT

PAPER NUMBER

1638

MAIL DATE

DELIVERY MODE

09/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,193	Applicant(s) TAKEDA ET AL.	
	Examiner Medina A. Ibrahim	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-52 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-6, 13, 21, 24, 31, 40, 44-45, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 1 and 2, and a method of detecting polymorphism of said genetic markers.

Group II, claim(s) 1-4, 7-9,13,21,24, 31, 40, 44, 52, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 3-4 and 8-9, and a method of detecting polymorphism of said genetic markers.

Group III, claim(s) 1-4, 10,13,21, 24, 31, 40, 52, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 22 and 23, and a method of detecting polymorphism of said genetic markers.

Group IV, claim(s) 1-4, 11,13,21,24, 31, 40, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 24 and 25, and a method of detecting polymorphism of said genetic markers.

Group V, claim(s) 1-4, 12-13,21,24, 31, 40 drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 26 and 27, and a method of detecting polymorphism of said genetic markers.

Group VI, claim(s) 1-4, 13-19 ,21,24, 31, 40, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 5-6 and 10-13, and a method of detecting polymorphism of said genetic markers.

Group VII, claim(s) 1-4, 20,13,21,24-26, 31, 40, 46,48, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with

Art Unit: 1638

primers SEQ ID NO: 16-17 and 14-15, and a method of detecting polymorphism of said genetic markers.

Group VIII, claim(s) 1-4, 13, 21-22,24, 31, 40, 47, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 28 and 29, and a method of detecting polymorphism of said genetic markers.

Group IX, claim(s) 1-4, 13, 21, 23-24, 31, 40, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 30 and 31, and a method of detecting polymorphism of said genetic markers.

Group X, claim(s) 1-4, 13, 21, 26, 24, 31, and 40 drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 14-19 and 34-35, and a method of detecting polymorphism of said genetic markers.

Group XI, claim(s) 1-4, 13, 21, 27, 24, 31, 40, 49, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 14-19 and 36-37, and a method of detecting polymorphism of said genetic markers.

Group XII, claim(s) 1-4, 13, 21, 28, 24, 31, 40, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 38-39, and a method of detecting polymorphism of said genetic markers.

Group XIII, claim(s) 1-4, 13, 21, 29, 24, 31, 40, 50, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 40-41, and a method of detecting polymorphism of said genetic markers.

Group XIV, claim(s) 1-4, 13, 21, 30, 24, 31, 40, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 42-43, and a method of detecting polymorphism of said genetic markers.

Group XV, claim(s) 1-4, 13, 21, 31-32, 24, 31, 40, 51, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 14-19 and 44-45, and a method of detecting polymorphism of said genetic markers.

Group XVI, claim(s) 1-4, 13, 21, 33, 24, 31,40, drawn to a genetic marker linked FHB resistance factor, wherein the genetic marker is being amplified with primers SEQ ID NO: 46-47, and a method of detecting polymorphism of said genetic markers.

Art Unit: 1638

Group XVII, claim(s) 34, drawn to a method of isolating a DNA fragment.

Group XVIII, claims 35-39, drawn to a method for producing a transgenic plant using isolated DNA fragment.

Group XIX, claim 41, drawn to a kit

Group XX, claim 42, drawn to a gene detecting apparatus

. Group XXI, claim 43, drawn to a primer population.

The inventions listed as Groups I-XXI do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the genetic marker which is linked to FHB resistance factor of claim 1 is known in the prior art as evidenced by the multiple of references cited in the European Search Report provided in Applicant's IDS. Dahleen et al teach identification of QTLs associated with FHB resistance in barley. Therefore, there is no special technical feature that links the invention of Group I to any of the other inventions II-XXI.

Furthermore, the special technical feature of each of Groups I-XVI is the specific primer sequences.

The special technical feature of Group XVII that is not recited in any of the other groups is a DNA isolation method.

The special technical feature of Group XVIII that is not recited in any of the other groups is the plant transformation using isolated DNA fragment.

The special technical feature of Group XIX that is not recited in any of the other groups is a kit.

The special technical feature of Group XX that is not recited in any of the other groups is a gene detecting apparatus.

The special technical feature of Group XXI that is not recited in any of the other groups is a primer population.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the

Art Unit: 1638

requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Medina A. Ibrahim whose telephone number is (571)272-0797. The examiner can normally be reached on M-TH 8:00 am to 5:30 PM, and every other Friday from 8:00 AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1638

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAI
9/2/2008

/Medina A Ibrahim/
Primary Examiner, Art Unit 1638